



US006305621B1

(12) **United States Patent**
Kolacz et al.

(10) **Patent No.:** US 6,305,621 B1
(45) **Date of Patent:** Oct. 23, 2001

(54) **PIVOTING FLUID CONDUIT JOINT AND
ONE-WAY BRAKE**

(75) Inventors: **David J. Kolacz**, Plymouth; **Ross Mack**, Valparaiso; **Robert W. Steingass**, Valparaiso; **Brian M. Tylisz**, Valparaiso, all of IN (US)

(73) Assignee: **Task Force Tips, Inc.**, Valparaiso, IN (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/516,076**

(22) Filed: **Mar. 1, 2000**

(51) Int. Cl.⁷ **B05B 15/08**

(52) U.S. Cl. **239/587.2; 239/587.4;
239/587.6; 239/588; 169/24**

(58) Field of Search **239/587.1-587.6,
239/588; 169/24, 25, 52; 285/261-267,
185**

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | | |
|-----------|---|---------|--------------|-----------|
| 557,799 | * | 4/1896 | Gorter | 239/587.3 |
| 1,599,907 | | 9/1926 | MacGregor | . |
| 1,665,810 | * | 4/1928 | Gillick | 285/264 |
| 2,998,199 | | 8/1961 | Miscovich | . |
| 3,612,408 | * | 10/1971 | Holleman | 239/587.3 |
| 4,350,297 | * | 9/1982 | Martin | 239/587.4 |
| 4,392,618 | | 7/1983 | Evans et al. | . |

| | | | | |
|-----------|---|---------|------------------|-----------|
| 4,506,738 | * | 3/1985 | Evans et al. | 239/587.4 |
| 4,697,742 | * | 10/1987 | Schnipke | 239/587.4 |
| 4,793,557 | | 12/1988 | Marchese et al. | . |
| 5,249,632 | * | 10/1993 | Sparlense et al. | 239/587.4 |

FOREIGN PATENT DOCUMENTS

| | | | | |
|--------------|--|--------|------|---|
| 1 104 275 | | 6/1961 | (DE) | . |
| G93 16 904.3 | | 3/1994 | (DE) | . |
| 43 38 662 | | 5/1995 | (DE) | . |

OTHER PUBLICATIONS

Akron Brass, Ozzie & Ladder Pipes, 1 pg.
Akron Brass, Ozzie™ Portable Oscillating Monitor, 4pgs., 1998.
Akron Brass, Ozzie—Style 911 to the Rescue!, 4 pgs., 1998.
Helitactics Limited, Sniper Attack Monitor, 1 pg., 1999.
PCT/ISA/220, International Search Report received Oct. 27, 2000, 8pgs.

* cited by examiner

Primary Examiner—David A. Scherbel

Assistant Examiner—Dinh Q. Nguyen

(74) *Attorney, Agent, or Firm*—Lathrop & Clark LLP

(57)

ABSTRACT

A pivoting joint with a ball and socket joined by trunnions for use in fluid conduits, particularly firefighting devices such as portable monitors and the like. The pivoting joint can be used on an inlet of the device to provide a pivoting motion for one or more inlet hoses, and/or on the outlet of the device to direct the discharge in one or more directions. An optional one-way brake can be used to limit unintended movement about one or more axis of motion.

4 Claims, 5 Drawing Sheets

